

REMARKS

The present invention relates to a thermoplastic resin composition having excellent flame retardancy and impact strength, which gives rise to a molded article thereof having good appearance.

The rejection of Claims 1-8 under 35 U.S.C. § 103(a) over US 6,727,312 (US '312) in view of US 6,001,929 (US '929) is respectfully traversed.

Applicant notes that US '312 does not disclose or suggest the requirement (C) of Claim 1, 7, and 8. It is noted that US '929 discloses silica as suitable inorganic filler (see US '929 at col. 6, line 3). But US '929 neither discloses nor suggests the requirement (C) in Claims 1, 7, and 8. Therefore, Claims 1, 7, and 8 are distinguishable from the combined disclosures of US '312 and US '929. Applicant respectfully requests that the Examiner consider the statement and evidence of criticality for the requirement (C), which can be found in the present Specification.

The Examiner's attention is directed a statement of criticality for the to page 12, lines 6-11, which reads as follows:

When the amount of the fine silica exceeds 5 mass %, sufficient flame retardancy is unable to be obtained. Additionally, the impact resistance is lowered and the appearance becomes no good. When the amount of the fine silica is below 0.1 mass %, on the other hand, it is impossible to obtain good drop-preventing effect.

This statement of criticality should also be considered in view of the data on page 21 of the present Specification. The Examiner's attention is also directed to pages 19-20 for explanations of the Table terms.

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(C) Fine Silica

Silica-1: AEROSIL 130 (Trade name; manufactured by Japan Aerosil Inc.; average particle diameter: 17 nm).

Silica-2: NYACOL DP5820 (Trade name; manufactured by Nyacol Nano Technologies, Inc.; ethylene glycol solution containing 30 mass % fine silica having average particle diameter of 20 nm).

Silica-3: FB48 (Trade name; manufactured by Denki Kagaku Kogyo Kabushiki Kaisha; fine particulate silica having an average particle diameter of 16 µm; used as comparative control)

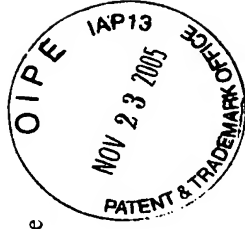


Table 1: Composition of Blend

Components Blended	Example 1	Example 2	Example 3	Example 4	No Comp (A)	No Silica	Too much silica	Silica wrong size
(A) PC-PDMS	99.5	99.5	25.0	50.0	99.5	Comparative Example 1 100	Comparative Example 3 94.0	Comparative Example 4 99.5
PC-1			74.2					
PC-2				48.7				
Silica-1	0.5						6.0	
Silica-2		0.5	0.5	1.0	0.5			
Silica-3								0.5
PTFE				0.3				

Table 2 Evaluation Results

Items Evaluated	Example 1	Example 2	Example 3	Example 4	No Comp (A)	No Silica	Too much silica	Silica wrong size
IZOD Impact Strength (Kj/m ²)	75	75	80	65	25	75	15	10
Fluidity MI	20	22	20	30	20	20	18	17
Appearance of Molded Article	good	good	good	good	good	good	grains are present	grains are present
Haze	25	10	15	-	70	5	90	90
Flame	V-0	V-0	V-0	-	V-2	V-2	V-2	V-2
Retardancy	-	-	-	V-0	-	-	-	-
Oxygen Index	39	40	38	40	30	36	39	27

It is noted that Table 1 shows the compositional makeup, while Table 2 shows the evaluated properties of the resultant compositions. It is also noted that Silica-1 and Silica-2 have average particle sizes that fall within the claimed range (17 nm and 20 nm), while Silica-3 has an average particle size that falls outside of the claimed range (16 μm). In this regard, the Examiner's attention is directed to Comparative Examples 2-3 in which the compositions contain a silica having the claimed particle size, but outside of the claimed compositional range of 0.1 to 5 mass% (i.e., **no silica** (CE 2) or **too much silica** (CE 3)). The Examiner's attention is also directed to Comparative Example 4 (**silica wrong size**), in which the compositions have a silica particle whose size falls outside of the claimed range (*cf.* 16 μm).

Inspection of the evaluated results shows that:

- (1) when there is no silica (Comp. Ex. 2), composition exhibits a reduction of flame retardancy;
- (2) when there is too much silica (Comp. Ex. 3), the composition exhibits a reduction in impact strength and flame retardancy, grains are present, and an increase in haze; and finally
- (3) when the silica particle size is too large (Comp. Ex. 4), the composition exhibits a reduction in impact strength and flame retardancy, grains are present, and an increase in haze.

In view of these considerations, coupled with the fact that the claimed composition and process for making the same are distinguishable over the disclosures of US '312 and US '929, it is respectfully requested that the Examiner withdraw this rejection.

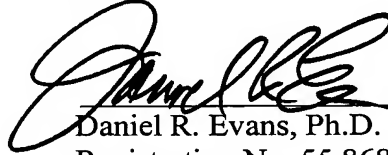
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In light of the amendments to the Claims and the remarks contained herewith, it is believed that the present application is now in a condition for allowance. Should the Examiner deem that a personal or telephonic interview would be helpful in advancing this application toward allowance, he is encouraged to contact Applicant's undersigned representative at the below-listed telephone number.

Respectfully submitted,

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MAIER & NEUSTADT, P.C.

Norman F. Oblon

A handwritten signature in black ink, appearing to read "Daniel R. Evans", is written over a horizontal line.

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